

FIXED CANARD 2-D GUIDANCE OF ARTILLERY PROJECTILES**ABSTRACT OF THE DISCLOSURE**

Applicants have invented a guidance system for guiding a projectile, the
10 projectile having a body portion capable of being spun in a first direction and a nose
portion connected to the body portion by a spin control coupling, the nose portion being
capable of being spun in a second direction. The nose portion including first and second
aerodynamic surfaces fixedly attached to the nose portion and configured and arranged to
cause the nose portion to spin in a second direction during projectile flight. The nose
15 portion including third and fourth aerodynamic surfaces fixedly attached to the nose
portion, which are configured and arranged such that when the nose portion is spinning
the third and fourth aerodynamic surfaces have no net effect on projectile flight, but when
the nose portion is despun using the spin control coupling, the third and fourth
aerodynamic surfaces induce both a moment and a lateral force to the nose, causing the
20 projectile flight path to change.